# AARON 640

## Premium FM Rebroadcast Receiver


AARON 640 is Inovonics' third generation FM rebroadcast/translator receiver built to handle the most challenging reception conditions. Boasting off air performance superior to even the most elite professional and consumer receivers, AARON 640 provides many of the features of its big brother, AARON 650, but at a budget-friendly price point.

The extremely sensitive and selective front end of the AARON 640 digitally decodes the entire analog baseband and delivers low-latency composite/MPX, AES-digital and balanced analog signals for retransmission.

The AARON 640 hosts a built-in Web server that enables total remote control of the receiver using any computer or mobile device browser, and also provides full SNMP support. Rear-panel and self-logging alarms constantly check for program audio loss, RF loss, and RDS loss (or 'hijacking'). Online notifications can alert personnel with email and SMS text messages for any or all alarms.

The front panel displays left and right audio levels and local LED alarms and also has an LCD screen with jog wheel for advanced control and editing of all tuning and monitoring parameters.

3 year WARRANTY

Made in USA

INOVONICS BROADCAST

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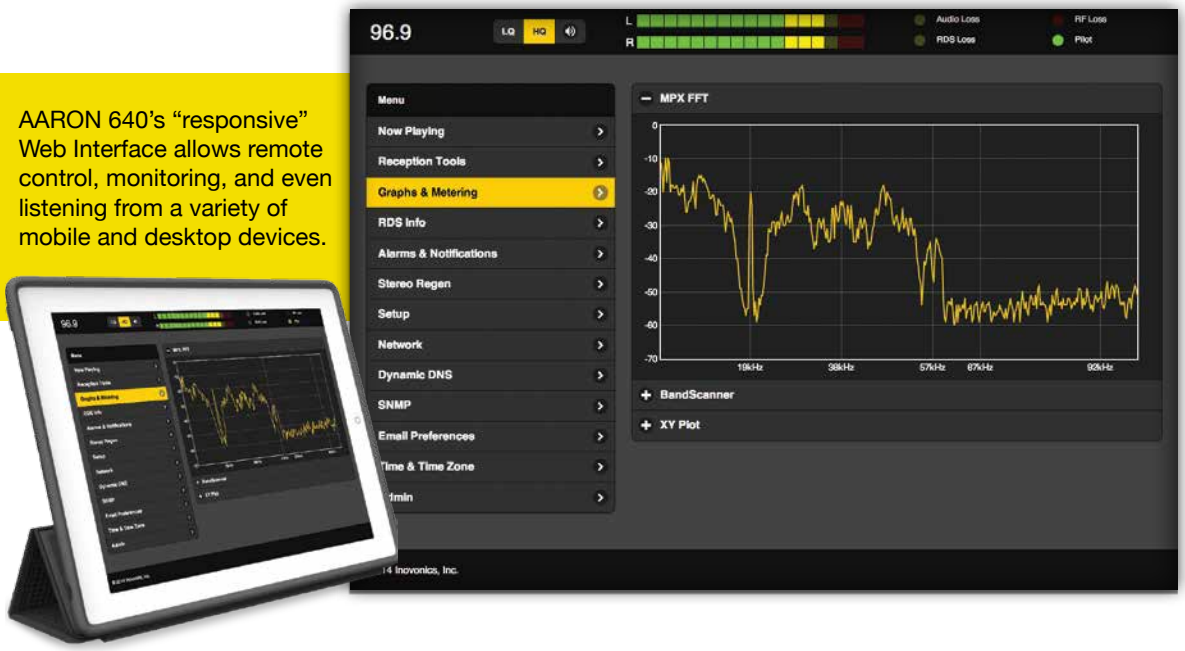
# AARON 640 FM REBROADCAST RECEIVER

AARON 640's "responsive" Web Interface allows complete setup, listening, logging, and control of the unit from your PC, tablet, or smartphone, and reliable 2-way connectivity is ensured with a built-in Dynamic DNS utility. An FM BandScanner™ is included for advanced off-air metering. Reception bandwidth, auto-blending, and many other receiver parameters are controlled via manual or automatic reception processing.

## FEATURE HIGHLIGHTS

- High-sensitivity 'Software-Defined-Radio' design
- Full-bandwidth Composite/MPX output with negligible latency (delay) and adjustable composite processing
- Balanced, low-latency L/R analog and AES digital audio outputs; built-in test tone generator
- Active reception processing that mitigates poor reception situations and responds to changing RF signal conditions
- Intuitive, menu-driven front-panel setup, plus a built-in Web server for full remote operation over any IP network
- Supports SNMP remote monitoring
- Built-in FM BandScanner™ for onsite RF spectrum analysis
- Local and remote graphic readout of program levels, plus a graph of program density (loudness) over time
- Local, remote, and self-logging alarms for audio loss, RF loss, and RDS loss or 'hijacking'. Alarms include email or text-message notification.
- The AARON 640 boots or resets in less than one second and draws only 5 watts from the AC mains.

AARON 640's "responsive" Web Interface allows remote control, monitoring, and even listening from a variety of mobile and desktop devices.



# TECHNICAL SPECIFICATIONS

## GENERAL PERFORMANCE

**Tuning Range:**
65.0MHz - 108.0MHz in 200kHz, 100kHz, or 50kHz steps

**Sensitivity/Noise Performance:**
(Unweighted monaural SNR for AES Digital and L/R Analog line outputs; referenced to ±75kHz carrier deviation at specified RF input levels):

≥82dB Digital, ≥80dB Analog at 60dBµV
≥78dB Digital, ≥76dB Analog at 40dBµV
≥60dB Digital/Analog at 20dBµV
≥50dB Digital/Analog at 10dBµV
≥43dB Digital/Analog at 0dBµV

**Selectable IF bandwidths:**
311kHz, 287kHz, 254kHz, 236kHz,
217kHz, 200kHz, 184kHz, 168kHz,
151kHz, 133kHz, 114kHz, 97kHz,
84kHz, 72kHz, 64kHz and 56kHz

**Frequency Response:**
MPX Output: ±0.5dB, 20Hz - 100kHz;
Line Outputs (digital/analog): ±0.2dB, 20Hz - 15kHz

**Stereo Separation (at 1kHz):**
MPX Output: ≥45dB;
Line Outputs (digital/analog): ≥50dB

**Program Signal Latency (Delay):**
MPX Output: ≤250µs;
AES Digital & L/R Analog Line Outputs: ≤2.0ms

**Radio Data System:**
RBDS or RDS

## INPUTS & OUTPUTS

**Antenna Input:**
50-ohm (N connector)

**Composite/MPX Output:**
Unbalanced (BNC), adjustable between 1V p-p and 6V p-p for ±75kHz carrier deviation; 75-ohm source impedance

**Digital Line Output:**
AES3 (XLR) 24-bit, 48kHz sampling; adjustable between –30dBFS and 0 dBFS for ±75kHz carrier deviation, with or without de-emphasis.

**Analog Line Outputs:**
Active balanced L/R outputs (XLR) are adjustable between –20dBu and +18dBu (+15.5dBm), corresponding to ±75kHz carrier deviation, with or without de-emphasis; 200-ohm source impedance.

**Network Port:**
RJ45 jack TCP/IP network connection for complete remote setup and operation of the AARON 640 with full SNMP support

**Headphone Jack:**
Quarter-inch (TRS), monitors off-air program signal; menu-adjustable volume

## MISCELLANEOUS

**Composite Audio Processing:**
Up to 3dB of composite clipping may be engaged to better define the FM deviation limit. The 19kHz stereo pilot and the 57kHz RDS subcarrier are stripped, filtered, and reinserted after the clipper.

**Test Tone Generator:**
20Hz - 20kHz; 60dB attenuator

**AC Mains Requirements:**
90 - 130VAC or 200 - 255VAC, 50/60Hz; 5W

**Size and Weight:**
1.75”/44m H, 19”/483mm W, 9.5”/240mm D (1U);
9lbs./4kg (net), 12lbs./5.4kg (shipping)

**Environmental:**
32°F/0°C to 122°F/50°C; 0-95% non-condensing relative humidity; 10,000ft/ 3048m

**Conformances:**
EN50081-1
EN50082-1
93/68/EEC
2002/95/EC